

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Benjamin Tabor on 8/14/08.

**Please amend Claims 1, 23, 26, 36, 37, 45, and 47-49 as follows:**

1. (Currently Amended) A method for automating the optimization of search results displayed in a search Web page, the method comprising:

receiving search results provided from a search engine to a user according to a search term, wherein the search results are selected and ranked by a relevance schema;

collecting data that represents a performance of each of the received search results, the collected data quantifying interactions of various users with the search results, the collected data originating from at least one of a plurality of various sources having various types of valuations, the search results and collected data being initially incomparable against each other absent normalization, wherein the various sources reflect data of quantified interactions of the various users with the search results;

combining the collected data by a normalization procedure that generates performance data for each of the search results, wherein the performance data reflects behavior of the various users, and wherein the normalization procedure comprises:

- (1) aggregating the collected data from the various sources;
- (2) compiling various types of valuations, associated with the aggregated data, into common measurements;
- (3) weighting the common measurements based on relative importance of the various sources, wherein the relative importance performance is a reflection of [[the]] a value of each of the various sources as a predictor of relevance of the search results; and
- (4) normalizing the weighted common measurements to determine performance data associated with each of the search results such that the search results are comparable against each other and such that the normalized performance data is comparable against expected performance data of the search results indicated by expected performance data;

determining whether the expected performance data is below the normalized performance data by comparing the normalized performance data to the expected performance data for each of the search results;

when the normalized performance data of a search result of the search results is below the expected performance data associated

therewith, identifying the search result as underperforming and diagnosing the underperforming search result based on results of the comparison between the normalized performance data and the expected performance data; and

updating the relevance schema based on the diagnosis such that operation of a search engine that provided the search results is adjusted to improve relevance of subsequent search results.

23. (Currently Amended) An automated search result optimization system implemented in a computer that provides search results to a user, comprising:

an input component to receive input data representing a performance of a search result generated by a search engine that is executed on the computer for a search term, the input data originating from a plurality of various sources;

a data collection processor to collect the input performance data from the plurality of various sources wherein the input performance data collected includes implicit performance data that describes an aggregation of various users interactions during various sessions with the search result, wherein the input performance data from one of the plurality of various sources is initially incomparable against the input performance data from another of the plurality of various sources and the search results are initially incomparable against each other absent normalization,

wherein the plurality of various sources reflecting collected input performance data;

a comparison processor to compare the collected input performance data of the search result to an expected performance data of the search result, wherein comparing comprises normalizing input performance data by the following steps:

(1) aggregating the collected input performance data from the plurality of various sources;

(2) compiling various types of valuations, associated with the aggregated collected input performance data, into common measurements; and

(3) normalizing the common measurements to determine common input performance data associated with each of the search results such that search results are comparable against each other and such that normalized input performance data of search results is comparable against expected performance data of the search results;

a diagnostic processor to determine, based on the comparison, whether the collected input performance data diverges from the expected performance data by a quantified threshold, and if so, identify the search result as underperforming and diagnose the underperforming search result utilizing results of the comparison to select from a set of predefined

corrective actions, wherein one of the set of corrective actions is implementing an adjustment processor; and

the adjustment processor to automatically adjust operation of the search engine,

wherein the adjusted operation of the search engine improves the performance of the search result by tailoring a ranking of subsequent search results in accordance with the collected input performance data, and

wherein an increased weight is attached to the collected input performance data from one or more of the various sources based on the implicit performance data thereby influencing the automatic adjustment of the operation of the search engine.

26. (Currently Amended) The system of Claim 25, wherein the diagnostic processor compares the performance of the search result as represented by the normalized collected performance data to the expected performance data of the search result, and wherein [[the]] the search result is underperforming when the performance is lower than the quantified threshold below the expected performance data.

36. (Currently Amended) The system of Claim\_24, wherein the sample test data includes data obtained from a test of the search result's relevance performed on a sample of a subset of users.

37. (Currently Amended) The system of Claim 24, wherein the diagnostic processor is further configured to diagnose at least one possible reason why the performance of the underperforming search result compares unfavorably against the expected performance data, wherein the reason is determined upon executing one or more of a set of processes comprising considering whether the search result is no longer valid, considering whether the search result appears in a poor location, whether a search term that generated the search result is easily misspelled, considering whether the search term is too broad to generate a meaningful result, or considering whether a search for the search term should be constrained to a specific resource.

45. (Currently Amended) One or more computer-accessible media having instructions stored on the media for facilitating the automated optimization of a search result in a search result user interface, the instructions comprising:

receiving search results provided by a search engine in response to an inputted search term from a user;

collecting data that represents a performance of each search result of the search results from at least one of a plurality of various sources of performance data that includes implicit data collected by quantifying interactions of various users during various sessions with each of the search results, wherein the performance data from one of the plurality of

various sources is initially incomparable against the performance data from another of the plurality of various sources and the search results are initially incomparable against each other absent normalization, wherein the plurality of various sources reflecting the performance data quantifying interactions of various users;

normalizing the collected performance data in accordance with a relative importance associated with each of the various sources of the performance data, wherein normalizing comprises formatting the performance data in a common measurement that is associated with each of the search results such that the search results are comparable against each other and such that normalized performance data of search results is comparable against expected performance data of search results associated with expected performance data;

comparing the normalized performance data against the expected performance data for [[the]] each search result;

based on the comparison, determining whether the normalized collected performance data diverges from the expected performance data by a quantified threshold and identifying a search result, of the search results, as underperforming when it is associated with divergent normalized collected performance data;

diagnosing at least one possible cause for the underperforming search result based on a result of the comparison between the normalized performance data and the expected performance data;

utilizing the at least one possible cause to select from a set of predefined corrective actions, wherein one of the set of corrective actions is adjusting an operation of the search engine accordance with the normalized collected performance data.

47. (Currently Amended) The computer-accessible media of Claim 45, wherein the instruction to normalize the collected performance data that describes the user's interactions with the search results in accordance with a relative importance of the source of the performance data includes instructions to give greater weight to the performance data from the more importance sources of the at least one of the plurality of various sources and to combine the performance data to reflect the relative importance of the source from which the performance data originated.

48. (Currently Amended) The computer-accessible media of Claim 45, wherein the instruction to compare the normalized performance data to the expected performance data includes an instruction to determine that the search result is underperforming when the normalized performance data is the quantified threshold below the expected performance data.

49. (Currently Amended) The computer-accessible media of Claim 47, wherein the most important source of data is the implicit performance data, and the instruction to normalize the collected performance data includes an instruction to give implicit performance data greater weight when combining the performance data.

***Allowable Subject Matter***

2. The following is an examiner's statement of reasons for allowance:

In summary, the claimed subject matter found in the independent claims regarding user interactions having an effect on the search results by quantifying this performance data and the normalization procedures for normalizing this data and comparing it against expected performance data of the search results is not reasonably taught or made obvious by the prior art(s).

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

4. Any prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is advised that, although not used in the rejections above, prior art cited on any PTO-892 form and not relied upon is considered materially relevant to the applicant's claimed invention and/or portions of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent S. Stace whose telephone number is 571-272-8372 and fax number is 571-273-8372. The examiner can normally be reached on M-F 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu M. Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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